

NEW DAM PLAN REVIEW CHECKLIST

For dams, embankments or other water retention structures

Dam Owner Name: _____ Home Phone: _____
Address: _____ Work Phone: _____

- ☐ **Location Information** - A sketch or map that clearly indicates the location of the project. The map should include fire numbers or other landmarks that will enable staff to locate the project site.

Town _____ N, Range _____ E / W, Section _____, Q _____, QQ _____, QQQ _____

Name of Dam: _____ Name of Waterway: _____

Name of Designer: _____ Agency/Firm : _____

Phone: _____ Fax: _____ email: _____

Address: _____

The following information is required for review of dam plans. Please check all the information that is included in the submitted design package. Where a blank line has been provided, please insert the information for ease of entry into the database.

General Design Information

- ☐ Purpose of dam _____
- ☐ Drainage area (*square miles*) _____
- ☐ Planned pool elevation _____ Q_{100} water surface elevation _____
- ☐ Normal pool surface area (*acres*) _____ Water surface area at maximum pool (*acres*) _____
- ☐ Normal storage (from bottom of impoundment to planned pool) (*acre-feet*) _____
- ☐ Maximum storage (from bottom of impoundment to point of overtopping) (*acre-feet*) _____
- ☐ Structural height (difference between design elevation and elevation of streambed at downstream toe) (*feet*) _____
- ☐ Hydraulic height (difference between normal pool elevation and tailwater elevation) (*feet*) _____
- ☐ Design storm frequency/duration (must meet minimum from appropriate standard) (*year*) _____ / (*hour*) _____
- ☐ Design discharge (reservoir routing may reduce peak spillway outflow) (*cfs*). _____
- ☐ Include hydrologic and hydraulic calculations with the submittal.

Outlet/Spillway Information

- ☐ Outlet structure type, dimensions, elevations, joint treatment, corrosion protection, shown on plans/specifications.
- ☐ Principle spillway capacity* (*cfs*) _____ Total spillway capacity* (*cfs*) _____
* calculated at point of embankment overtopping
- ☐ Auxiliary spillway location, elevations, bottom width, side slopes, materials, shown on plans/specifications
- ☐ Auxiliary spillway constructed in natural undisturbed soils or show stability/erosion analysis
- ☐ Are there drawdown facilities? _____ Is there access for gate operation? _____
- ☐ Is there a trash rack? _____ Is there an anti-vortex device? _____

Embankment Information

- ☐ Elevation (design elevation) of top of embankment (low point in embankment crest) _____
- ☐ Elevation of stream bottom at downstream toe of embankment. _____
- ☐ Length (ft) _____ Top width (ft) _____ Side slopes (us)____:____ (ds) ____:____ Fill volume (yd³) _____
- ☐ Embankment fill soil type, compaction method and maximum lift thickness shown on plans/specifications
- ☐ Foundation soil type and preparation shown on plans/specifications
- ☐ Depth of peat at structure or center of dike (if applicable)
- ☐ Seepage control measures (cutoff walls, toe drains, anti-seep collars, french drains, slurry trench, clay core)

Other Considerations

- ☐ Benchmark description for all elevations (include one on dam and one off dam benchmark location)
- ☐ Description of construction sequence (coffer dams, water diversion, etc.)
- ☐ Description/plan of construction erosion protection measures.
- ☐ Description of post-construction scour protection at outlet structures and on embankments
- ☐ Clearing and grubbing plan for impoundment area (if necessary)
- ☐ Will normal pond surface flow lands not owned by the applicant? Yes* / No
- ☐ Will embankment affect floodplain on adjacent property (increase $\geq 0.01'$ off owner property)? Yes* / No
* If yes, must have secured appropriate flowage/flooding easement or have affected property owner(s) as co-applicant(s)
- ☐ Will embankment affect floodplain elevation in adjacent watershed during 100-year event? Yes* / No
* Prepare encroachment analysis and secured appropriate flooding easement from affected property owner(s)
- ☐ Projected minimum flows and water quality of discharge (if applicable)
- ☐ Warning signs and portage route locations if necessary (structures on navigable waterway with permanent pool)
- ☐ Request for waivers and waiver from design standard criteria included

Additional information required for large dams (must comply with all requirements of NR 333)

- ☐ Stamp indicating preparation by a Wisconsin registered P.E.
- ☐ Regional flood flows calculated per NR116.07 (3)
- ☐ Determination of floodplain boundary with and without dam per NR116.07(4)
- ☐ Stability analysis (for embankment with side slopes steeper than 2.5/1 and spillway structures, other than culverts)
- ☐ Identification of hydraulic shadow and calculations for dam break analysis per NR 333 and NR 116
- ☐ Dam hazard rating determined per NR333.06
- ☐ Operation, Inspection and Maintenance Plan and Emergency Action Plan
- ☐ Cost estimate for construction.

Signature (individual preparing form): _____ **Date:** _____

For DNR use only
Docket Number:

Financial Responsibility Consideration: